WHAT IS CLAIMED IS:

1. A recording apparatus for a holographic recording medium having an alignment mark and designed to irradiate a recording light beam onto a recording region of holographic recording medium to record information as a hologram, said recording apparatus comprising:

a recording laser irradiating said recording light beam for recording said hologram onto said holographic recording medium;

an alignment laser irradiating an alignment light beam onto said holographic recording medium, said alignment light beam being less absorbed than said recording light beam by said holographic information medium, and being reflected by said holographic recording medium;

a first lens converging said recording light beam irradiated from said recording laser and directing the converged recording light beam toward said holographic recording medium;

a second lens converging said alignment light beam irradiated from said alignment laser and directing said alignment light beam toward said holographic recording medium;

a photodetector detecting a light intensity of said alignment light beam reflected from said holographic recording medium to recognize said

alignment mark; and

a driving mechanism adjusting a region to be irradiated with said recording light beam relative to said holographic recording medium on the basis of said alignment mark.

2. The recording apparatus for a holographic recording medium according to claim 1, wherein said recording light beam to be irradiated onto said holographic recording medium includes a signal light beam and a reference light beam; and said hologram is formed by writing an interference fringe by intersecting said signal light beam with said reference light beam in said holographic recording medium.

3. The recording apparatus for a holographic recording medium according to claim 1, wherein said recording light beam is irradiated parallel with the track of said holographic recording medium from said recording laser to said medium.

4. The recording apparatus for a holographic recording medium according to claim 1, wherein the wavelength of said alignment light beam to be irradiated from said alignment laser is selected from those where a refractive index of said recording region after the recording of said hologram is substantially identical with a refractive index before the recording of said hologram.

5. The recording apparatus for a holographic

recording medium according to claim 1, wherein the wavelength of said alignment light beam to be irradiated from said alignment laser is selected from those where a magnitude of change in absorption coefficient of said recording region after the recording of said hologram becomes substantially maximum.

6. The recording apparatus for a holographic recording medium according to claim 1, further comprising;

a beam splitter splitting said recording light beam into two beams, one of which is utilized as a reference light beam;

a spatial modulator providing information to the other beam obtained from said splitting to obtain a signal light beam; and

two mirrors enabling said signal light beam to intersect with said reference light beam in said medium.

7. The recording apparatus for a holographic recording medium according to claim 6, wherein said signal light beam and said reference light beam are irradiated onto said holographic recording medium at an incident angle making it impossible to generate a primary interference of said alignment light beam.

8. The recording apparatus for a holographic recording medium according to claim 1, wherein said

second lens converging said alignment light beam to be irradiated from said alignment laser is formed integral with said first lens converging said recording light beam to be irradiated from said recording laser.

9. The recording apparatus for a holographic recording medium according to claim 1, wherein the wavelength of said recording light beam is shorter than the wavelength of said alignment light beam.

10. The recording apparatus for a holographic recording medium according to claim 2, wherein said interference fringe is written in a direction perpendicular to the track of said recording region.

11. A recording apparatus for a holographic recording medium having an alignment mark and designed to irradiate a recording light beam onto a recording region of a holographic recording medium to record information as a hologram; said holographic recording medium having a recessed/projected surface corresponding to a configuration of track of said recording region and being provided on said recessed/projected surface thereof with a reflective layer, and said recording apparatus comprising:

a recording laser irradiating said recording light beam for recording said hologram onto said holographic recording medium;

an alignment laser irradiating an alignment light beam onto said holographic recording medium, said

alignment light beam being less absorbed than said recording light beam by said holographic information medium, and being reflected by said holographic recording medium;

a first lens converging said recording light beam irradiated from said recording laser and directing the converged recording light beam toward said holographic recording medium;

a second lens converging said alignment light beam irradiated from said alignment laser and directing said alignment light beam toward said holographic recording medium;

a photodetector detecting a light intensity of said alignment light beam reflected from said holographic recording medium to recognize said alignment mark; and

a driving mechanism adjusting a region to be irradiated with said recording light beam relative to said holographic recording medium on the basis of said alignment mark.

12. The recording apparatus for a holographic recording medium according to claim 11, wherein said recording light beam to be irradiated onto said holographic recording medium includes a signal light beam and a reference light beam; and said hologram is formed by writing an interference fringe by intersecting said signal light beam with said reference

light beam in said holographic recording medium.

13. The recording apparatus for a holographic recording medium according to claim 11, wherein said recording light beam is irradiated parallel with the groove of said recessed/projected surface of said reflective layer of said holographic recording medium from said recording laser to said medium.

14. The recording apparatus for a holographic recording medium according to claim 11, wherein the wavelength of said alignment light beam to be irradiated from said alignment laser is selected from those where a refractive index of said recording region after the recording of said hologram is substantially identical with a refractive index before the recording of said hologram.

15. The recording apparatus for a holographic recording medium according to claim 11, wherein the wavelength of said alignment light beam to be irradiated from said alignment laser is selected from those where a magnitude of change in absorption coefficient of said recording region after the recording of said hologram becomes substantially maximum.

16. The recording apparatus for a holographic recording medium according to claim 11, further comprising;

a beam splitter splitting said recording light

beam into two beams, one of which is utilized as a reference light beam;

a spatial modulator providing information to the other beam obtained from said splitting to obtain a signal light beam; and

two mirrors enabling said signal light beam to intersect with said reference light beam in said medium.

17. The recording apparatus for a holographic recording medium according to claim 16, wherein said signal light beam and said reference light beam are irradiated onto said holographic recording medium at an incident angle making it impossible to generate a first order diffraction of said alignment light beam.

18. The recording apparatus for a holographic recording medium according to claim 11, wherein said second lens converging said alignment light beam to be irradiated from said alignment laser is formed integral with said first lens converging said recording light beam to be irradiated from said recording laser.

19. The recording apparatus for a holographic recording medium according to claim 11, wherein the wavelength of said recording light beam is shorter than the wavelength of said alignment light beam.

20. The recording apparatus for a holographic recording medium according to claim 12, wherein said interference fringe is written in a direction

perpendicular to the track of said recording region.

21. A reproducing apparatus for a holographic recoding medium having an alignment mark and designed to irradiate a reading light beam onto a recording region of holographic recording medium recorded information as a hologram to read said information, said reproducing apparatus comprising:

a reading laser irradiating said reading light beam for reading said hologram on said holographic recording medium;

an alignment laser irradiating an alignment light beam onto said holographic recording medium, said alignment light beam being less absorbed than said reading light beam by said holographic information medium, and being reflected by said holographic recording medium;

a first lens converging said reading light beam irradiated from said reading laser and directing the converged reading light beam toward said holographic recording medium;

a second lens converging said alignment light beam irradiated from said alignment laser and directing said alignment light beam toward said holographic recording medium;

a photodetector detecting a light intensity of said alignment light beam reflected from said holographic recording medium to recognize said

alignment mark; and

a driving mechanism adjusting a region to be irradiated with said reading light beam relative to said holographic recording medium on the basis of said alignment mark.

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